

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549-7010

February 17, 2009

Via U.S. Mail

Kenneth Uselton Secretary and Treasurer TGC Industries, Inc. 101 East Park Boulevard, Suite 955 Plano, Texas 75074

Re: TGC Industries, Inc.

Form 10-K for the Fiscal Year Ended December 31, 2007

Filed March 14, 2008

Response Letter dated February 6, 2009

File Number 001-32472

Dear Mr. Uselton:

We have reviewed your response letter and have the following comments. Please provide a written response to our comments. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Schedule 14 A Definitive Proxy Statement, filed April 25, 2008

Executive Compensation, page 14

1. We note you response to our prior comment 3. Your Executive Compensation discussion should provide an analysis of the material factors underlying your compensation policies and decisions. Please supplementally provide us with modified disclosure regarding the "financial and non-financial criteria" and the duties to "lead the Company, develop personnel, and continually improve the Company's services and operations" as they specifically pertain to your Company and to the evaluation of your executive officers. Tell us how you evaluate the fulfillment of these criteria and duties and how your evaluation affects the allocation of the bonus pool amounts. Refer to the Instructions to Item 402(b) of Regulation S-K, and to the Commission's guidance available at

Mr. Kenneth Uselton TGC Industries, Inc. February 17, 2009 Page 2

http://www.sec.gov/divisions/corpfin/guidance/execcompdisclosure.htm, when formulating your response.

Closing Comments

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

Please contact Tracey L. McNeil at (202) 551-3392, John W. Madison at (202) 551-3296, or me at (202) 551-3745 with any questions.

Sincerely,

H. Roger Schwall Assistant Director